CHIKUNGUNYA

Information for healthcare providers

Background

- Mosquito-borne viral disease characterized by acute onset of fever and severe polyarthralgia
- Often occurs as large outbreaks with high attack rates
- Outbreaks have occurred in countries in Africa, Asia, Europe, and the Indian and Pacific Oceans
- In late 2013, first local transmission in the Americas was reported on islands in the Caribbean

Chikungunya virus

- Single-stranded RNA virus
- Genus *Alphavirus*; Family *Togaviridae*

Mosquito vectors

- *Aedes aegypti* and *Aedes albopictus* are the primary vectors (above)
- Both are aggressive daytime biting mosquitoes

Animal hosts

- Humans are the primary host of chikungunya virus during epidemic periods

Clinical findings

- Majority of infected people become symptomatic
- Incubation period usually 3–7 days (range 1–12 days)
- Patients typically present with acute onset of fever and polyarthralgia
- Joint symptoms usually symmetric and often occur in hands and feet; they can be severe and debilitating
- Other symptoms may include headache, myalgia, arthritis, conjunctivitis, nausea/vomiting, or maculopapular rash
- Clinical laboratory findings can include lymphopenia, thrombocytopenia, elevated creatinine, and elevated hepatic transaminases

Laboratory testing

- Evaluate serum or plasma by:
  - Viral culture to detect virus in first 3 days of illness
  - RT-PCR to detect viral RNA in first 8 days of illness
  - Serology to detect IgM, IgG, and neutralizing antibodies that develop toward the end of the first week of illness
- Chikungunya testing is performed at CDC, several state health departments, and one commercial laboratory
- Contact your state health department for more information and to facilitate testing

Clinical course and outcomes

- Acute symptoms typically resolve within 7–10 days
- Rare complications include uveitis, retinitis, myocarditis, hepatitis, nephritis, bullous skin lesions, hemorrhage, meningoencephalitis, myelitis, Guillain-Barré syndrome, and cranial nerve palsies
- Persons at risk for severe disease include neonates exposed intrapartum, older adults (e.g., > 65 years), and persons with underlying medical conditions (e.g., hypertension, diabetes, or cardiovascular disease)
- Some patients might have relapse of rheumatologic symptoms (e.g., polyarthralgia, polyarthritis, tenosynovitis) in the months following acute illness
- Studies report variable proportions of patients with persistent joint pains for months to years
- Mortality is rare and occurs mostly in older adults

Treatment

- No specific antiviral therapy
- Supportive care with rest and fluids
- Non-steroidal anti-inflammatory drugs (NSAIDs) to relieve acute pain and fever
- Persistent joint pain may benefit from use of NSAIDs, corticosteroids, or physiotherapy

National Center for Emerging and Zoonotic Infectious Diseases
Division of Vector-Borne Diseases --- http://www/cdc.gov/ncezid/dvbd

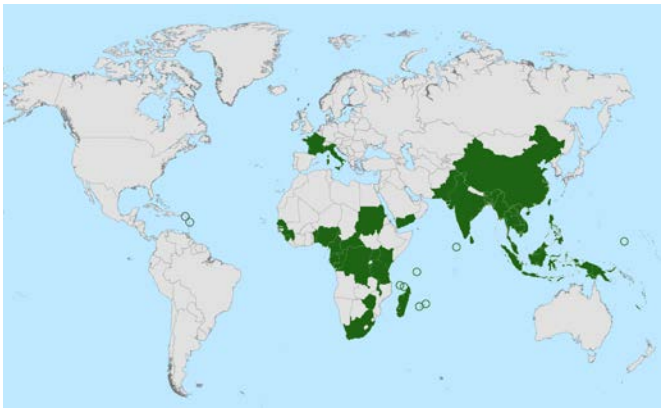
Distinguish dengue from chikungunya

- Dengue and chikungunya viruses are transmitted by the same mosquitoes and have similar clinical features
- The two viruses can circulate in the same area and can cause occasional co-infections in the same patient
- Chikungunya virus infection more likely to cause high fever, severe arthralgia, arthritis, rash, and lymphopenia
- Dengue virus infection more likely to cause neutropenia, thrombocytopenia, hemorrhage, shock, and deaths
- Important to rule out dengue virus infection because proper clinical management can improve outcome

Differential diagnosis

- Varies based on place of residence, travel history, and exposures
- In addition to dengue, other considerations include leptospirosis, malaria, rickettsia, group A streptococcus, rubella, measles, parvovirus, enteroviruses, adenovirus, other alphavirus infections (e.g., Mayaro, Ross River, Barmah Forest, O'nyong-nyong, and Sindbis viruses), post-infections arthritis, and rheumatologic conditions

Countries with reported local transmission of chikungunya virus (as of February 2014)



Surveillance and reporting

- Chikungunya virus infection should be considered in patients with acute onset of fever and polyarthralgia, especially travelers who recently returned from areas with known virus transmission
- Healthcare providers are encouraged to report suspected chikungunya cases to their state or local health department to facilitate diagnosis and mitigate the risk of local transmission
- Health departments should perform surveillance for chikungunya cases in returning travelers and be aware of the risk of possible local transmission in areas where *Aedes* species mosquitoes are active
- State health departments are encouraged to report confirmed chikungunya virus infections to CDC

Prevention and control

- No vaccine or medication is available to prevent chikungunya virus infection or disease
- Reduce mosquito exposure
  - Use air conditioning or window/door screens
  - Use mosquito repellents on exposed skin
  - Wear long-sleeved shirts and long pants
  - Wear permethrin-treated clothing
  - Empty standing water from outdoor containers
  - Support local vector control programs
- People infected with chikungunya or dengue virus should be protected from further mosquito exposure during the first week of illness to reduce the risk of local transmission
- People at increased risk for severe disease should consider not traveling to areas with ongoing chikungunya outbreaks

FOR MORE INFORMATION VISIT: http://www.cdc.gov/chikungunya/

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